

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

DRAFT DRAFT DRAFT DRAFT

Best Available Control Technology Guidelines

Part D: BACT Guidelines for Non-Major Polluting Facilities

October 20, 2000 (Revised June 6, 2003; December 5, 2003; July 9, 2004; December 3, 2004; July 14, 2006; October 3, 2008; December 2, 2016; February 2, 2018; February 1, 2019; [Month Day, 2020](#))

Deputy Executive Officer Science and Technology Advancement

Matt Miyasato
Chung S. Liu (Retired)

Authors:	Alfonso Baez	Program Supervisor
	Bahareh Farahani	Senior Air Quality Engineer
	Tom Lee, P.E.	Program Supervisor Senior Air Quality
Engineer	Jason Aspell	Assistant Deputy Executive Officer
	Martin Kay, P.E.	Program Supervisor (Retired)
	Howard Lange	Air Quality Engineer II (Retired)
Reviewed By:	Barbara Baird	Chief Deputy Counsel
	Amir Dejbakhsh	Assistant Deputy Executive Officer
	William Wong	Principal Deputy District Counsel
	Bhaskar Chandan	Senior Air Quality Engineering Manager
	Andrew Lee	Senior Air Quality Engineering Manager
	(Retired)	

Table of Contents

Abrasive Blasting – Enclosed.....	1
Absorption Chiller.....	2
Air Stripper – Ground Water Treatment	3
Aluminum Melting Furnace	4
Crucible or Pot.....	4
Reverberatory, Non-Sweating	4
Reverberatory or Rotary, Sweating	4
Ammonium Bisulfate and Thiosulfate Production.....	56
Asbestos Machining Equipment.....	67
Asphalt Batch Plant	78
Asphalt Roofing Line	89
Asphaltic Day Tanker.....	94
Auto Body Shredder.....	104
Ball Mill	114
Beryllium Machining Equipment.....	124
Boiler.....	134
Natural Gas or Propane Fired	134
Atmospheric Unit.....	144
Landfill Gas Fired.....	144
Digester Gas Fired	144
Brakeshoe Debonder	154
Brass Melting Furnace.....	164
Crucible	164
Reverberatory or Rotary, Non-Sweating	164
Reverberatory or Rotary, Sweating	164
Tilting Induction	164
Bulk Solid Material Handling – Other	184
Animal Feed Mfg. – Dry Material Handling	184
Clay, Ceramics and Refractories Handling (Except Mixing)	184
Coal, Coke and Sulfur Handling.....	184
Feed and Grain Handling.....	184
Paper and Fiber Handling	184
Pneumatic Conveying, Except Paper and Fiber.....	184
Railcar Dumper.....	184

Bulk Solid Material Ship Loading.....	1920
Non-White Commodities.....	1920
White Commodities.....	1920
Bulk Solid Material Ship Unloading.....	2021
Bulk Cement.....	2021
Other Bulk Solid Materials.....	2021
Bulk Solid Material Storage.....	2122
Coal, Petroleum Coke, Sulfur.....	2122
Other Non-White Commodities.....	2122
White Commodities.....	2122
Storage Tanks and Silos.....	2122
Other Open Storage.....	2122
Burnoff or Burnout Furnace (Excluding Wax Furnace).....	2223
Calciner.....	2324
Petroleum Coke.....	2324
Other.....	2324
Carpet Beating and Shearing.....	2425
Catalyst Manufacturing and Regeneration.....	2526
Calcining.....	2526
Reactor.....	2526
Rotary or Spray Dryer.....	2526
Regeneration, Hydrocarbon Removal.....	2526
Catalyst Solids Handling.....	2526
Charbroiler, Chain-driven (conveyorized).....	2627
Chemical Milling Tanks.....	2728
Aluminum and Magnesium.....	2728
Nickel Alloys, Stainless Steel and Titanium.....	2728
Chip Dryer.....	2829
Chrome Plating.....	2930
Decorative Chrome.....	2930
Hard Chrome.....	2930
Circuit Board Etcher.....	3031
Batch Immersion Type, Subtractive Process.....	3031
Conveyorized Spray Type, Subtractive Process.....	3031
Cleaning Compound Blender.....	3132
Coffee Roasting.....	3233

Roaster	3233
Handling Equipment.....	3233
Composting	3334
Co-composting.....	3334
Concrete Batch Plant	3435
Central Mixed	3435
Transit-Mixed	3435
Concrete Blocks and Forms Manufacturing	3536
Cotton Gin	3637
Crematory	3738
Degreaser – Other.....	3839
Batch-Loaded or Conveyorized Cold Cleaners	3839
Film Cleaning Machine	3839
Solvent Spraying.....	3839
Degreaser –Vapor Cleaning, Volatile Organic Compounds.....	3940
Batch.....	3940
Conveyorized.....	3940
Detergent Manufacturing.....	4041
Solids Handling	4041
Spray Dryer.....	4041
Dry Cleaning	4243
Perchloroethylene	4243
Petroleum Solvent.....	4243
Dryer – Kiln.....	4344
Dryer or Oven.....	4445
Carpet Oven.....	4445
Rotary, Spray and Flash Dryers	4445
Tray, Agitated Pan, and Rotary Vacuum Dryers	4445
Tenter Frame Fabric Dryer	4445
Other Dryers and Ovens – Direct and Indirect Fired	4445
Electric Furnace – Pyrolyzing, Carbonizing and Graphitizing.....	4547
Electrical Wire Reclamation – Insulation Burn-Off Furnace	4648
Ethylene Oxide Sterilization.....	4749
Aeration	4749
Quarantine Storage	4749
Expanded Polystyrene Manufacturing Using Blowing Agent.....	4850

Fatty Acid – Fat Hydrolyzing and Fractionation.....	4951
Fatty Alcohol.....	5052
Fermentation, Beer and Wine.....	5153
All Closed Systems.....	5153
All Open Systems	5153
Fiberglass Operations	5254
Fabrication – Hand and Spray Layup	5254
Panel Manufacturing.....	5254
Pultrusion.....	5254
Fish Reduction.....	5355
Cooker	5355
Digester, Evaporator and Acidulation Tank	5355
Dryer.....	5355
Meal Handling	5355
Rendering – Presses, Centrifuges, Separators, Tanks, Etc.....	5355
Flare.....	5557
Digester Gas or Landfill Gas from Non-Hazardous Waste Landfill	5557
Landfill Gas from Hazardous Waste Landfill	5557
Produced Gas.....	57
Organic Liquid Storage.....	57
Organic Liquid Loading	57
Other Flare Gas.....	58
Flow Coater, Dip Tank and Roller Coater.....	565958
Food Oven	60
Foundry Sand Mold – Cold Cure Process	586160
Fryer – Deep Fat.....	596261
Fugitive Emission Sources at Natural Gas Plants and Oil and Gas Production Fields	606362
Compressors, Centrifugal Type	606362
Compressors, Rotary Type	606362
Pressure Relief Valves	606362
Pumps – In Heavy Liquid Service	606362
Pumps – In Light Liquid Service.....	606362
Sampling Connections	606362
Valves, Fittings, Diaphragms, Hatches, Sight-Glasses, Open-Ended Pipes and Meters in VOC Service	606362
Fugitive Emission Sources at Organic Liquid Bulk Loading Facilities	616463

Compressors, Centrifugal Type	616463
Compressors, Rotary Type	616463
Connectors in Gas, Vapor or Light Liquid VOC Service	616463
Open Ended Valves and Pipes	616463
Pressure Relief Valves	616463
Process Valves – Gate, Globe and Ball	616463
Pumps – In Heavy Liquid Service	616463
Pumps – In Light Liquid Service	616463
Sampling Connections	616463
Fugitive Emission Sources, Other Facilities	626564
Compressors, Fittings, Open Ended Pipes, Pressure Relief Devices, , Valves, Pumps, Sampling Connections, Diaphragms, Hatches, Sight-Glasses and Meters in VOC Service	626564
Galvanizing Furnace.....	636665
Batch Operations	636665
Continuous Sheet Metal Operations	636665
Continuous Wire Operations	636665
Garnetting Equipment	646766
Gas Turbine	656867
Natural Gas Fired.....	656867
Emergency	656867
Landfill or Digester Gas Fired	666867
Glass Melting Furnace.....	677069
Decorator Glass	677069
Flat Glass	677069
<u>Glass Screen Printing</u>	<u>6771</u>
Incinerator – Hazardous Waste	697270
Incinerator – Infectious Waste.....	707371
Incinerator – Non-Infectious, Non-Hazardous Waste	717472
I.C. Engine, Portable	727573
Compression-Ignition	727573
Spark Ignition	737674
I.C. Engine, Stationary, Emergency	757775
Compression Ignition, Fire Pump	757775
Compression-Ignition, Other	767876
Spark Ignition	788078
I.C. Engine, Stationary, Non-Emergency, Non-Electrical Generators	808280

Landfill or Digester Gas Fired	808280
I.C. Engine, Stationary, Non-Emergency, Electrical Generator.....	82
Landfill or Digester Gas Fired	82
Jet Engine Test Facility	828482
Experimental High Altitude Testing	828482
Experimental Sea Level (Low Altitude) Testing	828482
Performance Testing	828482
Landfill Gas Gathering System	838583
Latex Manufacturing - Reaction.....	848684
Lead Melting Furnace	858785
Pot or Crucible, Non-Refining Operations	858785
Pot or Crucible, Refining Operations.....	858785
Reverberatory, Secondary Melting Operations.....	858785
Lead Oxide Manufacturing – Reaction Pot Barton Process	868886
Liquid Transfer and Handling	878987
Marine, Loading	878987
Tank Truck and Rail Car Bulk Loading, Class A (Rule 462)	878987
Tank Truck and Rail Car Bulk Loading, Classes B and C.....	878987
Gasoline Transfer and Dispensing	878987
Metal Heating Furnace	889088
Metallizing Spray Gun	899189
Mixer, Blender or Mill	909290
Dry	909290
Wet	909290
Nitric Acid Manufacturing	919391
Non-Metallic Mineral Processing – Except Rock or Aggregate	929492
Nut Roasting.....	939593
Roaster	939593
Handling Equipment.....	939593
Oil and Gas Production	949694
Combined Tankage.....	949694
Wellhead.....	949694
<u>Open Process Tanks: Chemical Milling (Etching) and Plating</u>	<u>9496</u>
Open Spraying – Spray Gun.....	969795
Oven (see "Dryer or Oven")	
Perlite Manufacturing System	979896

Pharmaceutical Manufacturing.....	<u>989997</u>
Operations Involving Solvents.....	<u>989997</u>
Solids Handling	<u>989997</u>
Solids Storage Tanks	<u>989997</u>
Phosphoric Acid - Thermal Process	<u>9910098</u>
Phthalic Anhydride.....	<u>10010199</u>
Plasma Arc Metal Cutting Torch.....	<u>101102100</u>
> 30 KVA Electrical Input.....	<u>101102100</u>
Polyester Resin Operations - Molding and Casting.....	<u>102101</u>
Polystyrene Extruder	<u>104104102</u>
Polystyrene Manufacturing	<u>105105103</u>
Powder Coating Booth	<u>106106104</u>
Precious Metal Reclamation.....	<u>107107105</u>
Incineration.....	<u>107107105</u>
Chemical Recovery and Chemical Reactions	<u>107107105</u>
Printing (Graphic Arts).....	<u>108108106</u>
Flexographic	<u>108108106</u>
Letterpress	<u>107</u>
Lithographic or Offset, Heatset	<u>108108106</u>
Lithographic or Offset, Non-Heatset	<u>109108106</u>
Rotogravure or Gravure—Publication and Packaging.....	<u>109109107</u>
Screen Printing and Drying.....	<u>109109107</u>
Process Heater – Non-Refinery	<u>110110108</u>
Reactor with Atmospheric Vent	<u>111111109</u>
Rendering	<u>112112110</u>
Processing Equipment	<u>112112110</u>
Meal Grinding and Handling System	<u>112112110</u>
Tanks and Miscellaneous Equipment	<u>112112110</u>
Resin Manufacturing	<u>113113111</u>
Continuous Polystyrene Process.....	<u>113113111</u>
Liquid-Phase, High-Density Polyethylene Slurry Process.....	<u>113113111</u>
Liquid-Phase Polypropylene Process.....	<u>113113111</u>
Other Resin Manufacturing	<u>113113111</u>
Rock – Aggregate Processing.....	<u>114114112</u>
Rocket Engine Test Cell.....	<u>115115113</u>
Rubber Compounding – Banbury Type Mixer.....	<u>116116114</u>

Sand Handling System with Shakeout and/or Muller in System.....	115
Sewage Treatment Plants	118 118 116
Smokehouse.....	119 119 117
Soil Vapor Extraction – Thermal/Catalytic Oxidization (Natural Gas – burner only).....	119
Solder Leveling –Hot Oil or Hot Air.....	121 121 119
Solvent Reclamation.....	122 122 120
Spray Booth.....	123 123 121
Automotive, Down-Draft Type.....	123 123 121
Other Types	123 123 121
Steel Melting Furnace	125 124 122
Electric Arc.....	125 124 122
Induction.....	125 124 122
Storage Tanks - Liquid	126 125 123
Asphalt.....	126 125 123
External Floating Roof	126 125 123
Fixed Roof	126 125 123
Fuming Sulfuric Acid	126 125 123
Grease or Tallow.....	126 125 123
Internal Floating Roof.....	126 125 123
Sulfuric Acid.....	126 125 123
Underground.....	126 125 123
Surfactant Manufacturing.....	127 126 124
Tank – Grease or Tallow Processing.....	128 127 125
Thermal Oxidizer (Afterburner), Catalytic Oxidizer – Natural Gas Fired	126
Tire Buffer.....	130 129 127
Vegetable Oil Purification.....	131 130 128
Vinegar Manufacturing	132 131 129
Wastewater System	133 132 130
Oil/Water Separator.....	133 132 130
Other Equipment.....	133 132 130
Wax Burnoff Furnace	134 133 131
Wood Processing Equipment	135 134 132
Woodworking.....	136 135 133
Pneumatic Conveyance System	136 135 133
Zinc Melting Furnace	137 136 134
Crucible or Pot.....	137 136 134

Reverberatory, Non-Sweating Operations[137136134](#)

Reverberatory, Sweating Operations[137136134](#)

Rotary, Sweating Operations[137136134](#)

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Abrasive Blasting – Enclosed

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse; or Cartridge Dust Collector (07-11-97)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Absorption Chiller

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		≤ 20 ppmv dry corrected to 3% O ₂ (10-20-2000)	Natural Gas (10-20-2000)	≤50 ppmv for firtube type, ≤ 100 ppmv for watertube type, dry corrected to 3% O ₂ (10-20-2000)	Natural Gas (10-20-2000)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Air Stripper – Ground Water Treatment

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Carbon Adsorber, Thermal Oxidizer, or Catalytic Oxidizer (10-20-2000)					

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Aluminum Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Crucible or Pot		≤60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (07-11-97)		Natural Gas with Ingots or Non-contaminated Scrap Charge, or Baghouse (10-20-2000)	
Reverberatory, Non-Sweating < 5 MM BTU/HR		≤60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Same as above. (10-20-2000)	
Reverberatory, Non-Sweating ≥ 5 MM BTU/HR		Natural Gas with Low NO _x Burner ≤ 60 ppmvd @ 3% O ₂ (10-20-2000)	Natural Gas (1990)		Same as above. (10-20-2000)	
Reverberatory or Rotary, Sweating < 5 MM BTU/HR	Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F) or Secondary Combustion Chamber (1990)	≤60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Baghouse and: - Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F); or - Secondary Combustion Chamber (1990)	
Reverberatory or Rotary, Sweating ≥ 5 MM BTU/HR	Same as Above (1990)	Natural Gas with Low NO _x Burner ≤ 60 ppmvd @ 3% O ₂ (10-20-2000)	Natural Gas (1990)		Same as above. (1990)	

Note: Some of this equipment may also subject to 40 CFR 63, Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Ammonium Bisulfate and Thiosulfate Production

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Packed Column Scrubber with Heat Exchanger and Mist Eliminator (1990)	Packed Column Scrubber for NH ₃ (1990)

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Asbestos Machining Equipment

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Air Cleaning Equipment (40 CFR Part 61 Subpart M) (07-11-97)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Asphalt Batch Plant

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas with Low NO _x Burner ≤ 33 ppmvd @ 3% O ₂ (10-20-2000) NEED COST- EFFECTIVENESS			Baghouse (1990)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Asphalt Roofing Line

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas (1990)	Natural Gas (1990)		Natural Gas with High Velocity Filter and Mist Eliminator (1990)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Asphaltic Day Tanker

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Fiberglass or Steel Wool Filter (07-11-97)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Auto Body Shredder

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse with Water Sprays in Hammermill (1988)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Ball Mill

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (07-11-97)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Beryllium Machining Equipment

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					High Efficiency Particulate Air Filter and Compliance with 40CFR Part 61, Subpart D (1988)	

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0; 10-03-2008 Rev. 1; 12-02-2016 Rev. 2

2-1-2019 Rev. 3

Equipment or Process: Boiler

Subcategory/Rating/ Size	Criteria Pollutants					
	VOC	NO _x ¹	SO _x	CO	PM ₁₀	Inorganic
Natural Gas Fired, > 2 and < 20 MMBtu/HR		Compliance with SCAQMD Rules 1146 or 1146.1 ² (12-02-2016)	Natural Gas (10-20-2000)	≤50 ppmvd for firetube type, ≤ 100 ppmvd for watertube type, corrected to 3% O ₂ (04-10-98)	Natural Gas (04-10-98)	
Propane Fired, > 2 and < 20 MMBtu/HR		≤ 12 ppmvd corrected to 3% O ₂ ² (10-20-2000)		≤50 ppmvd for firetube type, ≤ 100 ppmvd for watertube type, corrected to 3% O ₂ (04-10-98)		
Natural Gas or Propane Fired, ≥ 20 and < 75 MM Btu/HR		<u>Compliance with SCAQMD Rule 1146 (2-1-2019)</u>	Natural Gas (10-20-2000)	Same as above. (04-10-98)	Natural Gas (04-10-98)	<u>With Add-On Controls:</u> ≤ 5 ppmvd NH ₃ , corrected to 3% O ₂ ≤ 1 ppmvd ozone, corrected to 3% O ₂ (10-20-2000)
Natural Gas or Propane Fired, ≥ 75 MM Btu/HR		Compliance with SCAQMD Rule 1146 (12-02-2016)	Natural Gas (10-20-2000)	Same as above. (04-10-98)	Natural Gas (04-10-98)	<u>With Add-On Controls:</u> ≤ 5 ppmvd NH ₃ , corrected to 3% O ₂ ≤ 1 ppmvd ozone, corrected to 3% O ₂ (10-20-2000)

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory/Rating/ Size	Criteria Pollutants					Inorganic
	VOC	NO _x ¹	SO _x	CO	PM ₁₀	
Oil Fired ³		Compliance with SCAQMD Rule 1146 or 1146.1 (10-20-2000)	Fuel Sulfur Content ≤ 0.0015% by weight (10-03-2008)	≤ 50 ppmvd for firetube type ≤ 100 ppmvd for watertube type, corrected to 3% O ₂ (04-10-98)		
Atmospheric Unit, ≥ 2 and ≤ 10 MMBtu/HR		Compliance with SCAQMD Rules 1146 and 1146.1 (12-02-2016)		Compliance with SCAQMD Rules 1146 and 1146.1 (12-02-2016)		
Landfill Gas Fired, < 75 MMBTU/Hr		Compliance with SCAQMD Rules 1146 and 1146.1 (12-02-2016)		≤ 100 ppmvd at 3% O ₂ dry. (04-10-98)	≤ 0.1 gr/scf at 12% CO ₂ (Rule 409) (04-10-98)	
Digester Gas Fired, < 75 MMBTU/Hr		Compliance with SCAQMD Rules 1146 and 1146.1 (12-02-2016)		≤ 100 ppmvd at 3% O ₂ dry. (04-10-98)	≤ 0.1 gr/scf at 12% CO ₂ (Rule 409) (04-10-98)	

- 1) Electric utility boilers, refinery boilers rated >40 MMBtu/hr and sulfur plant reaction boilers rated ≥5 MMBtu/hr are excluded; and there are exceptions for low-use boilers and boilers that met a 12-ppm limit prior to 9/5/08. Applicants are advised to review these rules for further details.
- 2) A higher NO_x limit may be allowed for facilities required to have a standby fuel, where use of a clean standby fuel is not possible and an ultra low-NO_x burner is not available.
- 3) See Clean Fuels Policy in Part C of the BACT Guidelines. Oil firing is only allowed as a standby fuel, and where use of a clean standby fuel is not possible.

* Means those facilities that are minor facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Brakeshoe Debonder

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner or Secondary Combustion Chamber with ≥0.3 Second Retention Time at ≥1,400°F Achieved within 15 Minutes of Primary Burner Ignition (07-11-97)	Natural Gas (07-11-97)	Natural Gas (07-11-97)		Natural Gas (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Brass Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Crucible, ≤ 300 Lbs/Hr Process Rate		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas, Charge Clean Metal Only and Maintain Slag Cover Over Entire Melt Surface (1990)	
Crucible, > 300 Lbs/Hr Process Rate		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas, with Baghouse (1990)	
Reverberatory or Rotary, Non- Sweating		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Baghouse (1990)	
Reverberatory or Rotary, Sweating	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1990)	60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1990)	Natural Gas with Baghouse (1990)	
Tilting Induction, ≤ 300 Lbs/Hr Process Rate					Charge Clean Metal Only and Slag Cover Maintained Over Entire Melt Surface (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Tilting Induction, > 300 Lbs/Hr Process Rate					Baghouse (7-11-97)	
--	--	--	--	--	-----------------------	--

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Bulk Solid Material Handling – Other

Subcategory ³ /Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Animal Feed Mfg. – Dry Material Handling					Baghouse (07-11-97)	
Clay, Ceramics and Refractories Handling (Except Mixing)					Baghouse (1988)	
Coal, Coke and Sulfur Handling					Compliance with SCAQMD Rule 1158 (10-20-2000)	
Feed and Grain Handling					Baghouse (1988)	
Natural Fertilizer Handling ¹⁾					Baghouse or Equivalent Material Moisture (07-11-97)	
Paper and Fiber Handling					High Efficiency Cyclone with Baghouse (10-20-2000)	
Pneumatic Conveying, Except Paper and Fiber					Baghouse (1988)	
Railcar Dumper					Enclosed Dump Station and Water Spray for Wet Material (1988)	
Other Dry Materials Handling ²⁾					Enclosed Conveyors and Baghouse (7-11-97)	
Other Wet Materials Handling ²⁾					Water Spray or Adequate Material Moisture (1988)	

1. Includes conveying, size reduction, classification and packaging.
2. Includes conveying, size reduction and classification.
3. Also see Catalyst Manufacturing, Coffee Roasting, Non-Metallic Mineral Processing, Nut Roasting, Rendering, Pharmaceutical Operations, and Rock-Aggregate Processing for other bulk solid material handling.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Bulk Solid Material Ship Loading

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Non-White Commodities					Enclosed Conveyor and - Water Spray; or - Adequate Material Moisture (1988)	
White Commodities					Enclosed Conveyor and Baghouse Venting Ship Holds and Transfer Points (07-11-97)	

Notes:

1. Non-White commodities include coal, copper concentrate, sulfur, iron slag, iron ore, iron pellets, green petroleum coke and other wet commodities
2. White commodities include soda ash, salt cake, potash and other dry commodities.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Bulk Solid Material Ship Unloading

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Bulk Cement		Shore Utility Power (1988)	Shore Utility Power (1988)		Enclosed, Self- Unloading Ship (1988)	
Other Bulk Solid Materials					Enclosed Hold and Baghouse; or Material Moisture Equivalent to an Enclosed Hold and Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Bulk Solid Material Storage

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Coal, Petroleum Coke, Sulfur					Enclosed Storage in Compliance with SCAQMD Rule 1158 (10-20-2000)	
Other Non-White Commodities					Water Spray and Chemical Additives or Charged Fog Spray (1988)	
White Commodities					Enclosed Storage and Baghouse (1988)	
Storage Tanks and Silos					Baghouse or Filtered Vent for Dry Material; Water Spray or Adequate Moisture for Wet Material (07-11-97)	
Other Open Storage					Water with Chemical Additives (1988)	

Notes:

1. Other non-white commodities include copper concentrate, iron slag, iron ore, and iron pellets.
2. White commodities include cement, gypsum, lime, soda ash, borax and flour.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Burnoff or Burnout Furnace (Excluding Wax Furnace)

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All	Afterburner or Secondary Combustion Chamber with ≥0.3 Second Retention Time at ≥1,400°F Achieved within 15 Minutes of Primary Burner Ignition (07-11-97)	Compliance with Rule 1147 (2-1-2019)	Natural Gas (07-11-97)		Natural Gas (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Calciner

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Petroleum Coke	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	Compliance with Rule 1147 (2-1-2019)	Natural Gas with Flue Gas Desulfurization (> 90% Removal Efficiency) (1988)	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	0.005 gr/dscf Corrected to 3% O ₂ (1988)	
Other		Compliance with Rule 1147 (2-1-2019)	Natural Gas (1988)		Natural Gas with Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Carpet Beating and Shearing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Catalyst Manufacturing and Regeneration

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Calcining		Three-Stage NO _x Reduction Scrubber (1990)	Natural Gas (1990)		Baghouse (10-20-2000)	
Reactor		NO _x Scrubber (07-11-97)				
Rotary or Spray Dryer					Baghouse (07-11-97)	
Regeneration, Hydrocarbon Removal	Flare, Firebox, or Afterburner (≥ 0.3 Second Retention Time at $\geq 1,400$ °F) (07-11-97)					
Catalyst Solids Handling					Baghouse (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Charbroiler, Chain-driven (conveyorized)

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Catalytic Oxidizer (12-12-97)				Catalytic Oxidizer (12-12-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Chemical Milling Tanks

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Aluminum and Magnesium [†]						
Nickel Alloys, Stainless Steel and Titanium		Packed Chemical Scrubber (10-20-2000)			High Efficiency Mist Eliminator (10-20-2000)	

~~1) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic SCAQMD BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.~~

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Chip Dryer

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400°F) (10-20-2000)	Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1989)		Natural Gas with: - Baghouse and Limestone Filter Coating; or - Baghouse and Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400°F) (1989)	

Note: This equipment may also subject to 40 CFR 63, Subpart RRR – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Chrome Plating

	<u>Criteria Pollutants</u>					
<u>Rating/Size</u>	<u>VOC</u>	<u>NO_x</u>	<u>SO_x</u>	<u>CO</u>	<u>PM₁₀</u>	<u>Inorganic</u>
<u>Decorative Chrome</u>					<u>Packed Scrubber and Mist Suppressant (1988)</u> <u>Compliance with SCAQMD Rule 1469 (10-20-2000)</u>	
<u>Hard Chrome</u>					<u>Packed Scrubber and Mist Suppressant (1988)</u> <u>Compliance with SCAQMD Rule 1469 (10-20-2000)</u>	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Circuit Board Etcher

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Batch Immersion Type, Subtractive Process					Packed Water Scrubber and Etchant Solution Temperature Control (10-20-2000)	
Conveyorized Spray Type, Subtractive Process					Packed Water Scrubber and Etchant Solution Temperature Control (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Cleaning Compound Blender

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse or Wet Centrifugal Collector or Cyclone (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev. 1

XX-XX-2020 Rev. 2

Equipment or Process: Coffee Roasting

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Roaster, < 110,000 BTU/Hr		Compliance with Rule 1147 (2-1-2019)	Natural Gas (1988)		Natural Gas (1988)	
Roaster, ≥ 110,000 BTU/Hr	Afterburner <u>1</u> (0.3 Sec Retention Time at 1200 °F) (1990)	Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Cyclone and Afterburner (≥ 0.3 Second Retention Time at ≥ 1200 °F) (1990)	
Handling Equipment, < 1,590 Lbs/Hr All ^{2†}						
Handling Equipment, ≥ 1,590 Lbs/Hr All					Cyclone (1990)	

1) Gaseous process emissions from roasting operations are typically ducted to a thermal oxidizer or catalytic oxidizer. For NOx requirements, please refer to Thermal Oxidizer BACT determination. (XX-XX-2020)

2) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic SCAQMD South Coast AQMD BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

12-5-2003 Rev. 0
2-1-2019 Rev. 1

Equipment or Process: Composting

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic (Ammonia)
	VOC	NO _x	SO _x	CO	PM ₁₀	
Co-composting ^{a)}	Compliance with SCAQMD Rule 1133.2 ^{b)} (12-5-2003)					Compliance with SCAQMD Rule 1133.2 ^{b)} (12-5-2003)
Greenwaste composting	Compliance with SCAQMD Rule 1133.3 (2-1-2019)					Compliance with SCAQMD Rule 1133.3 (2-1-2019)

a) Co-composting is composting where biosolids and/or manure are mixed with bulking agents to produce compost.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Concrete Batch Plant

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Central Mixed, < 5 Cubic Yards/Batch					Water Spray (1988)	
Central Mixed, ≥ 5 Cubic Yards/Batch					Baghouse for Cement Handling and Adequate Moisture in Aggregate (1988)	
Transit-Mixed					Baghouse Venting the Cement Weigh Hopper and the Mixer Truck Loading Station; and Adequate Aggregate Moisture (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Concrete Blocks and Forms Manufacturing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Cotton Gin

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Rotary Drum Filter and Cyclone (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Crematory

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All	Secondary Combustion Chamber, ≥ 1500 °F (1990)	60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Secondary Combustion Chamber, ≥ 1500 °F (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Degreaser – Other

Rating/Size	Criteria Pollutants					
	VOC/ODC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Batch-Loaded or Conveyorized Cold Cleaners	Use of solvents containing 50 grams of VOC or less per liter of material (12-12-97)					
Film Cleaning Machine	Carbon Adsorber (10-20-2000)					
Solvent Spraying ¹⁾ , 1,1,1 Trichloroethane	Carbon Adsorber (1990) and Compliance with 40 CFR 63, Subpart T – National Emission Standards for Halogenated Solvent Cleaning (10-20-2000)					
Solvent Spraying ¹⁾ , Other VOCs	Compliance with SCAQMD Rule 1171 (10-20-2000)					

Note: Use of certain halogenated solvents is also subject to 40 CFR 63, Subpart T – National Emission Standards for Halogenated Solvent Cleaning

1) This subcategory includes solvent spray booths and remote reservoir cleaners.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Degreaser –Vapor Cleaning, Volatile Organic Compounds

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Batch	<p>Tier 1: Use of an automatically operated airtight or airless cleaning system that emits no more than $[4.3 \times V^{0.6}]$ lb/month of VOCs, where V is the cleaning chamber volume in cubic feet. Use of alternative equipment is allowed provided such equipment is subject to the same emissions limitation (lb/month of VOCs) as calculated above.</p> <p>Tier 2: Use of equipment that does not exceed $[22 \times A]$ lb/month of VOCs, where A is the solvent surface area in square feet, provided it is technically infeasible to use Tier 1 equipment because of part deformation, inherent part pressure, part type or geometry, soil type or amount, cleanliness sensitivity, or other reasons. (4-10-98)</p>					
Conveyorized	Use of a conveyorized vapor degreaser that does not exceed $[17 \times A]$ lb/month of VOCs, where, A is the solvent surface area in square feet (04-10-98)					

Notes:

1. Use of certain halogenated solvents is also subject to 40 CFR 63, Subpart T – National Emission Standards for Halogenated Solvent Cleaning
2. Use of VOCs not subject to the above-described NESHAP is also subject to [SCAQMD Rule 1122](#).
3. Any permit applicant may demonstrate that the Tier 1 BACT may not be technologically feasible for the applicant's permit unit. For batch-loaded vapor degreasing equipment, [SCAQMD South Coast AQMD](#) will consider the following three factors taken together as a whole, as well as any other technical factors presented by the applicant: a) Part Type and Geometry – In that different parts and part geometries lend themselves to different cleaning methods that may be acceptable to achieve proper cleanliness, [SCAQMD South Coast AQMD](#) will consider information presented by the applicant regarding the type and geometry of the part(s) proposed to be cleaned in determining what cleaning technologies are available for the part(s) in questions; b) Soil Type and Amount – In that different types and quantities of soils being cleaned from parts lend themselves to different cleaning methods, [SCAQMD South Coast AQMD](#) will consider information presented by the applicant regarding the soil type and soil quantity of the part(s) proposed to be cleaned in determining what cleaning technologies are available for the part(s) in question; c) Cleanliness Sensitivity – In that (i) different parts have different levels of sensitivity to cleanliness (e.g., medical and high technology device parts may need to achieve an extremely high level of cleanliness, whereas standard plumbing supplies may tolerate a lower level of cleanliness), and (ii) the integrity of certain parts may be compromised by exposure to the reduced pressure environment of airless cleaning systems; [SCAQMD South Coast AQMD](#) will consider information presented by the applicant regarding the cleanliness sensitivity of the part(s) proposed to be cleaned in determining what cleaning technologies are available for the part(s) in question.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Detergent Manufacturing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Solids Handling					Cyclone and Baghouse (07-11-97)	
Spray Dryer		Natural Gas with Low-NO _x Burner (1988)	Natural Gas (1988)		Natural Gas with: - Cyclone and Baghouse; or - Cyclone, Scrubber and Electrostatic Precipitator (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Drum Reclamation Furnace

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 Sec. Retention time at ≥ 1400 °F) (1990)	Natural Gas (1990)	Natural Gas (1990)		Natural Gas with After- burner (> 0.3 Sec. Retention Time at ≥ 1400 °F) and Baghouse (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

7-9-2004 Rev. 1

Equipment or Process: Dry Cleaning

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC/ODC	NO _x	SO _x	CO	PM ₁₀	
Perchloroethylene	Delisted as a VOC. See SCAQMD Rule 1421 – Control of Perchloroethylene Dry Cleaning Operations ¹ (06-13-97)					
Petroleum Solvent ²	Closed Loop, Dry-to-Dry Machine with a Refrigerated Condenser (10-20-2000) or Evaporatively Cooled Condenser (7-9-2004)					

¹ Rule 1421 implements the federal National Emission Standard for Hazardous Air Pollutant for Perchloroethylene Dry Cleaning Facilities (40 Code of Federal Regulations [CFR] 63.320, *et seq*) and the state Airborne Toxic Control Measure (ATCM) for Emissions of Perchloroethylene from Dry Cleaning Operations (17 California of Regulation [CCR] 93109, *et seq*).

²This Equipment may also be subject to AQMD Rule 1102 – Dry Cleaners Using Solvent Other Than Perchloroethylene.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Dryer – Kiln

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All ¹		Compliance with Rule 1147 (2-1-2019)	Natural Gas (1988)		Natural Gas (1988)	

¹Does not include digester gas or landfill gas fired units

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
2-2-2018 Rev. 1
2-1-2019 Rev 2

Equipment or Process: Dryer or Oven

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Carpet Oven		30 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas (1990)	
Rotary, Spray and Flash Dryers ¹⁾		Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Baghouse (1990)	
Tray, Agitated Pan, and Rotary Vacuum Dryers		Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas (1990)	
Tenter Frame Fabric Dryer		30 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	
Other Dryers and Ovens – Direct and Indirect Fired ^{2,3}		30 ppmvd corrected to 3% O ₂ (04-10-98)	Natural Gas (10-20-2000)		Natural Gas (10-20-2000)	

1. Dryers for foodstuff, pharmaceuticals, aggregate & chemicals.
2. Does not include food or bakery ovens. See listing for “Food Oven.”
3. Does not include digester gas or landfill gas units.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Electric Furnace – Pyrolyzing, Carbonizing and Graphitizing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F) (1988)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Electrical Wire Reclamation – Insulation Burn-Off Furnace

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 Second Retention Time at ≥ 1400 °F); Or Secondary Combustion Chamber (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	Natural Gas (1988)	Natural Gas (1988)		Natural Gas with Baghouse and: - Afterburner ((≥ 0.3 Second Retention Time at ≥ 1400 °F) or - Secondary Combustion Chamber (≥ 0.3 Second Retention Time at ≥ 1400 °F) (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Ethylene Oxide Sterilization

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Aeration	Recirculation Vacuum Pump-Seal Fluid with Fluid Reservoir Vented to: Chemical Scrubber; or Afterburner (≥ 0.3 second retention time at ≥ 1,400°F); or Catalytic Afterburner (at ≥ 280°F) (07-11-97)					
Quarantine Storage	Unvented Enclosure with Internal Circulation Through Activated Carbon Impregnated with Sulfuric Acid (1989)					

Note: Ethylene Oxide Sterilization may also be Subject to 40 CFR 63, Subpart O – Emission Standards for Ethylene Oxide Sterilization Facilities.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Expanded Polystyrene Manufacturing Using Blowing Agent

Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
All	For VOC Emissions: Incineration (≥ 0.3 Sec. Retention Time at ≥ 1400 °F) (1990)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Fatty Acid – Fat Hydrolyzing and Fractionation

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Condenser or Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1300 °F) (10-20-2000)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Fatty Alcohol

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 second retention time at ≥ 1,400°F) (07-11-97)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
XX-XX-2020 Rev. 1

Equipment or Process: Fermentation, Beer and Wine

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All Closed Systems	Carbon Adsorber (10-20-2000)					
All Open Systems	Scrubber with Approved Liquid Waste Disposal (10-20-2000)					
<u>Wine Fermentation Tanks: Closed-Top < 30,000 gallons capacity of each tank in system (XX-XX-2020)</u>	<u>Water Scrubber or Chiller Condenser with 67.0% combined capture and control efficiency averaged over length of fermentation season (mass balance basis)</u>					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Fiberglass Operations

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Fabrication— Hand and Spray Layup	Compliance with SCAQMD Rule 1162 (10-20-2000)				Airless Spray Equipment and Spray Booth with Mesh-Type Filter (1988)	
Panel Manufacturing	Curing Oven, Impregnation Tables and Mixing Tanks Vented to an Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F). Storage and Holding Tanks Vented to a Carbon Adsorber (1988)	Natural Gas Fired Curing Oven; Electrically Heated Cellophane Oven and Laminating Table (1988)	Natural Gas (10-20-2000)		Natural Gas Fired Curing Ovens, Cellophane Ovens Vented to an Electrostatic Precipitator and Panel Cutting Saw Vented to Baghouse (1988)	
Pultrusion	Styrene Suppressed Resin (1988), and Compliance with SCAQMD Rule 1162 (10-20-2000)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev. 1

XX-XX-2020 Rev. 2

Equipment or Process: Fish Reduction

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Cooker	Scrubber with Chlorinated Solution (≤ 20 ppmv Cl ⁻ Outlet Conc., ≥ 0.6 Sec. Retention Time and ≤ 200 °F Outlet Temp.) (1988)	Compliance with Rule 1147 (2-1-2019)				
Digestor, Evaporator and Acidulation Tank	Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1200 °F) (1990)	Compliance with Rule 1147 (2-1-2019)			Natural Gas with Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1200 °F) (1990)	
Dryer	Scrubber with Chlorinated Solution (≤ 20 ppmv Cl ⁻ Outlet Conc., ≥ 0.6 Sec. Retention Time and ≤ 200 °F Outlet Temp.) (1990)	Compliance with Rule 1147 (2-1-2019)			Natural Gas and Scrubber with Chlorinated Solution (≤ 20 ppmv Cl ⁻ Outlet Conc., ≥ 0.6 Sec. Retention Time and ≤ 200 °F Outlet Temp.) (1990)	
Meal Handling ¹						
Rendering – Presses, Centrifuges, Separators, Tanks, Etc.	Water Condenser and Vent to Dryer Firebox (1988)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

1) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic [SCAQMD South Coast AQMD](#) BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
XX-XX-2020 Rev. 1

Equipment or Process: Flare

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Digester Gas or Landfill Gas from Non-Hazardous Waste Landfill	Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1400 °F, Auto Combustion Air Control, Automatic Shutoff Gas Valve and Automatic Re-Start System (1988) <u>Compliance with Rule 1118.1 (Landfill gas only) (XX-XX-2020)</u>	0.06 lbs/MM Btu (1988) <u>Compliance with Rule 1118.1- (XX-XX-2020)</u>		Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1400 °F, and Auto Combustion Air Control (1988) <u>Compliance with Rule 1118.1 (Landfill gas only) (XX-XX-2020)</u>	Knockout Vessel (1988)	
Landfill Gas from Hazardous Waste Landfill	Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1500 °F, Auto Combustion Air Control, Automatic Shutoff Gas Valve and Automatic Re-Start System (1988) <u>Compliance with Rule 1118.1</u>	0.06 lbs/MM Btu (1988) (2020) <u>Compliance with Rule 1118.1 (XX-XX-2020)</u>		Ground Level, Shrouded, ≥ 0.6 Sec. Retention Time at ≥ 1500 °F, and Auto Combustion Air Control (1988) <u>Compliance with Rule 1118.1 (XX-XX-2020)</u>	Knockout Vessel (1988)	
<u>Produced Gas (XX-XX-2020)</u>	<u>Compliance with Rule 1118.1</u>	<u>Compliance with Rule 1118.1</u>		<u>Compliance with Rule 1118.1</u>		
<u>Organic Liquid Storage (XX-XX-2020)</u>		<u>Compliance with Rule 1118.1</u>		<u>Compliance with Rule 1118.1</u>		
<u>Organic Liquid Loading (XX-XX-2020)</u>		<u>Compliance with Rule 1118.1</u>		<u>Compliance with Rule 1118.1</u>		
<u>Other Flare Gas (XX-XX-2020)</u>		<u>Compliance with Rule 1118.1</u>				

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Flow Coater, Dip Tank and Roller Coater

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
< 36 lbs/day VOC	Compliance with Regulation XI (10-20-2000)					
≥ 36 lbs/day VOC	Coating with Lower VOC Content than Required by Applicable Rules, and Emissions from Coating Area, Flash Off Area, Drying Area, and Oven Vented to Control Device Achieving ≥ 90% Overall Efficiency (1988) Or Super Compliant Materials with ≤ 5% VOC by Weight (10-20-2000)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

2-2-2018 Rev. 0

Equipment or Process: Food Oven

Subcategory ¹	Rating/ Size	Criteria Pollutants					Inorganic
		VOC	NOx	SOx	CO	PM10	
Ribbon Burner	> 500°F		60 ppmvd @ 3% O ₂ (2-2-2018)	Natural Gas (2-2-2018)	Compliance with applicable SCAQMD Rules 407 or 1153.1(2-2-2018)	Natural Gas (2-2-2018)	
	≤ 500°F		30 ppmvd @ 3% O ₂ (2-2-2018)	Same as above	Same as above	Same as above	
Other Direct Fired Burner			30 ppmvd @ 3% O ₂ (2-2-2018)				
Infrared Burner			30 ppmvd @ 3% O ₂ (2-2-2018)				
Add-on Control for Bakery Oven processing yeast leavened products with emissions ≥ 30 lb VOC/day		Catalytic oxidizer with 95% overall control efficiency (mass basis); catalyst inlet temperature ≥ 600°F; ceramic prefilter (2-2-2018)	Compliance with SCAQMD Rule 1147 at the time of applicability (2-2-2018)				

¹Indirect Fired units may be subject to Rules 1146 and 1146.1 and BACT for Process Heater

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Foundry Sand Mold – Cold Cure Process

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All			Packed Column Scrubber with pH of Solution Maintained at a Minimum of 8.0 (1988)			

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

Equipment or Process: Fryer – Deep Fat

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Integrated Afterburner/Oil Heater < 2 MM Btu/hr	≥ 0.3 Sec. Retention Time at ≥ 1400 °F (2-1-2019)	Natural Gas (1990)	Natural Gas (1990)		≥ 0.3 Sec. Retention Time at ≥ 1400 °F	
Integrated Afterburner/Oil Heater ≥ 2 MM Btu/hr	≥ 0.3 Sec. Retention Time at ≥ 1400 °F (2-1-2019)	Natural Gas (1990)	Natural Gas (1990)		≥ 0.3 Sec. Retention Time at ≥ 1400 °F, and Electrostatic Precipitator or High Efficiency Mist Eliminator (10-20-2000) (2-1-2019)	
Non-Integrated Direct and In-Direct Oil Heater (Steam, Thermal Fluid Heater and burner exhaust gases)		60 ppm Compliance with SCAQMD Rule 1147 (2-1-2019)				

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

12-5-2003 Rev. 1

Equipment or Process: Fugitive Emission Sources at Natural Gas Plants and Oil
and Gas Production Fields

Subcategory/Rating/Size	Criteria Pollutants					
	VOC	NOx	SOx	CO	PM10	Inorganic
Compressors, Centrifugal Type	Seal System with a Higher Pressure Barrier Fluid (04-10-98); and Compliance with SCAQMD Rule 1173 (12-5-2003)					
Compressors, Rotary Type	Enclosed Seal System Connected to Closed Vent System (04-10-98); and Compliance with SCAQMD Rule 1173					
Pressure Relief Valves	Connected to Closed Vent System or Equipped with Rupture Disc if Applicable (4-10-98); and Compliance with SCAQMD Rule 1173 (12-5-2003)					
Pumps – In Heavy Liquid Service	Single Mechanical (4-10-1998); and Compliance with SCAQMD Rule 1173 (12-5-2003)					
Pumps – In Light Liquid Service	Sealless Type if Available and Compatible; or Double or Tandem Seals, and Vented to Closed Vent System (4-10-98); and Compliance with SCAQMD Rule 1173 (12-5-2003)					
Sampling Connections	Closed-Purge, Closed-Loop, or Closed-Vent System (4-10-98); and Compliance with SCAQMD Rule 1173 (12-5-2003)					
Valves, Fittings, Diaphragms, Hatches, Sight-Glasses, Open-Ended Pipes and Meters in VOC Service	Compliance with SCAQMD Rule 1173 (12-5-2003)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0; 12-5-2003 Rev. 1

Equipment or Process: Fugitive Emission Sources at Organic Liquid Bulk
Loading Facilities

Subcategory/Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Compressors, Centrifugal Type	Seal System with a Higher Pressure Barrier Fluid; < 500 ppmv by USEPA Method 21 with Quarterly I&M Program ¹⁾ (04-10-98)					
Compressors, Rotary Type	Enclosed Seal System Connected to Closed Vent System; < 500 ppmv by USEPA Method 21 with Quarterly I&M Program ¹⁾ (04-10-98)					
Connectors ²⁾ in Gas, Vapor or Light Liquid VOC Service	< 500 ppmv by USEPA Method 21 with Quarterly I&M Program ¹⁾ (04-10-98)					
Open Ended Valves and Pipes	Compliance with SCAQMD Rule 1173 where Applicable (10-20-2000)					
Pressure Relief Valves	Connected to Closed Vent System or Equipped with Rupture Disc if Applicable (4-10-98); and Compliance with AQMD Rule 1173 (10-20-2000)					
Process Valves – Gate, Globe and Ball	Compliance with AQMD Rule 1173, where Applicable (10-20-2000)					
Pumps – In Heavy Liquid Service	Single Mechanical; < 1000 ppmv by USEPA Method 21 with Quarterly I&M (4-10-1998)					
Pumps – In Light Liquid Service	1. Sealless Type if Available and Compatible, or 2. Double or Tandem Seals and Vented to Closed Vent System; < 1000 ppmv by USEPA Method 21 with Approved SCAQMD South Coast AQMD I&M; <1000 ppmv by USEPA Method 21 with Approved SCAQMD South Coast AQMD I&M (4-10-98)					
Sampling Connections	Closed-Purge, Closed-Loop, or Closed-Vent System (4-10-98)					

1) Quarterly I&M shall be consistent with [SCAQMD](#) Rule 1173 and other applicable requirements except that leaks between 500 and 1000 ppmv must be repaired within 14 days after detection.

2) Connectors include flanges, screwed or other joined fittings

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

12-5-2003 Rev. 1

Equipment or Process: Fugitive Emission Sources, Other Facilities

Subcategory/Rating/Size	Criteria Pollutants					
	VOC	NOx	SOx	CO	PM10	Inorganic
Compressors, Fittings, Open Ended Pipes, Pressure Relief Devices, , Valves, Pumps, Sampling Connections, Diaphragms, Hatches, Sight-Glasses and Meters in VOC Service	Compliance with Rule 1173, where Applicable by Rule (12-5-2003)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Galvanizing Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Batch Operations		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1988)		Natural Gas with Baghouse with Lime Coating (1988)	
Continuous Sheet Metal Operations		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1988)		Natural Gas with Packed Column Scrubber Serving the Caustic, Acid Pickling Tanks and/or Metal Preparation Tanks (1988, 2000)	
Continuous Wire Operations		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (1988)		Natural Gas with Noncombustible Covering on Molten Metal Surface, Baghouse, and Packed Column Scrubber Serving the Metal Preparation Tanks (1988, 2000)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Garnetting Equipment

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse or Rotary Drum Filter (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

12-3-2004 Rev. 1

Equipment or Process: Gas Turbine

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Natural Gas Fired, < 3 MWe		9 ppmvd @ 15% O ₂ (10-20-2000)		10 ppmvd @ 15% O ₂ (10-20-2000)		With Add-On Controls: 9 ppmvd ammonia @ 15% O ₂ (10-20-2000)
Natural Gas Fired, ≥ 3 MWe and < 50 MWe		2.5 ppmvd @ 15% O ₂ x <u>efficiency (%)</u> ¹⁾ 34% (6-12-98)		10 ppmvd @ 15% O ₂ (6-12-98)		With Add-On Controls: 5.0 ppmvd ammonia @ 15% O ₂ (10-20-2000)
Natural Gas Fired, ≥ 50 MWe	2.0 ppmvd (as methane) @ 15% O ₂ , 1-hour avg. OR 0.0027 lbs/MMBtu (higher heating value) (10-20-2000)	2.5 ppmvd @ 15% O ₂ , 1-hour rolling avg. OR 2.0 ppmvd @ 15 %O ₂ , 3-hour rolling avg. x <u>efficiency (%)</u> ¹⁾ 34% (10-20-2000)		6.0 ppmvd @ 15% O ₂ , 3-hour rolling avg. (10-20-2000)		With Add-On Controls: 5.0 ppmvd ammonia @ 15% O ₂ (10-20-2000)
Emergency		See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)	See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)		See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Landfill or Digester Gas Fired		25 ppmv, dry, corrected to 15 %O ₂ (1990)	Compliance with Rule 431.1 (10-20-2000)	130 ppmv, dry, corrected to 15 %O ₂ (10-20-2000)	Fuel Gas Treatment for Particulate Removal (1990)	
--------------------------------------	--	--	---	---	--	--

Notes: 1) The turbine efficiency correction for NO_x is limited to 1.0 as a minimum. The turbine efficiency is the demonstrated percent efficiency at full load (corrected to the higher heating value of the fuel) without consideration of any downstream heat recovery (12-3-2004).

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Glass Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Decorator Glass		Natural Gas with Low NOx Burner (10-20-2000); Cullet in Raw Material Charged > 80% (1988)			Baghouse (10-20-2000)	
Flat Glass		Natural Gas with Heating Modifications: <ul style="list-style-type: none"> - Excess Oxygen in Ports < 5% - Cullet in Raw Material Charged > 15% - Hot Spot Temperature < 2,700 °F (1988)	Process Modification: Sulfur Content of Batch Charged < 0.25% by Weight of Total Batch (1988)		Baghouse (10-20-2000)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

XX-XX-2020 Rev. 0

Equipment or Process: Glass Screen Printing

<u>Subcategory/ Rating/Size</u>	<u>Criteria Pollutants</u>					<u>Inorganic</u>
	<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM₁₀</u>	
<u>Flat Glass</u>	<u>Compliance with Rule 1145 or use of Rule 1145 compliant UV/EB or water-based coatings</u>					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Incinerator – Hazardous Waste

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Automatic Combustion Air Control, ≥ 2 Sec. Retention Time and ≥ 1800 °F (1988)	Natural Gas Supplemental Fuel with Selective Non-catalytic Reduction (1988)	Natural Gas Supplemental Fuel and Spray Dryer with Lime Injection (1988)	Automatic Combustion Air Control, ≥ 2 Sec. Retention Time and ≥ 1800 °F (1988)	0.002 gr/dscf at 12% CO ₂ (1988)	

Note: The equipment may also be subject to 40 CFR 264, Subpart O--Incinerators

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Incinerator – Infectious Waste

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
≤ 300 lbs/hr	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1800 °F) (1988)	Natural Gas as Auxiliary Fuel (1988)	Natural Gas as Auxiliary Fuel with Wet Scrubber (1988)	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1800 °F) (1988)		
> 300 lbs/hr	Same as Above	Same as Above	Same as Above	Same as Above	0.04 gr/dscf Corrected to 12% CO ₂ , with Enclosed Automatic Feed and Ash Removal System (1988)	

Note: The equipment may also be subject to 40 CFR 60, Subpart Ec--Standards of Performance for Hospital/Medical/Infectious Waste Incinerators for Which Construction Is Commenced After June 20, 1996

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

7-9-2004 Rev. 1

Equipment or Process: Incinerator – Non-Infectious, Non-Hazardous Waste

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
≤ 300 lbs/hr	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1600 °F) (1988)	Natural Gas as Auxiliary Fuel (1988)	Natural Gas as Auxiliary Fuel with Wet Scrubber (1988)	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1600 °F) (1988)	Natural Gas as Auxiliary Fuel with Enclosed Automatic Feed and Fly ash Removal System (1988)	
> 300 lbs/hr and < 750 lbs/hr	Same as Above	Same as Above	Same as Above	Same as Above	0.04 gr/dscf Corrected to 12% CO ₂ , with Enclosed Automatic Feed and Ash Removal System (1988)	
≥ 750 lbs/hr	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1800 °F) (1988)	Same as Above	Same as Above	Multiple Chamber Starved Air Design (≥ 0.5 Sec. Retention Time at ≥ 1800 °F) (1988)	Same as Above	

Note: The equipment may also be subject to 40 CFR 60, Subpart CCCC--Standards of Performance for New Stationary Sources: Commercial and Industrial Solid Waste Incineration Units.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
7-14-2006 Rev. 1
12-02-2016 Rev. 2
2-2-2018 Rev. 3
[XX-XX-2020 Rev. 4](#)

Equipment or Process: I.C. Engine, Portable ¹

		Criteria Pollutants					
Subcategory	Rating/Size	VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
Compression-Ignition ³	50 ≤ HP < 75			<u>Tier 4 Final:</u> 4.7 grams/kW-hr (3.5 grams/bhp-hr) (12-02-2016)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-2003) 9-15-2000)	<u>Tier 4 Final:</u> 5.0 grams/kW-hr (3.7 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Final:</u> 0.03 grams/kW-hr (0.02 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (12-02-2016)
	75 ≤ HP < 175		<u>Tier 4 Final:</u> 0.40 grams/kW-hr (0.30 grams/bhp-hr) (2-2-2018)	<u>Tier 4 Final:</u> NMHC only: 0.19 grams/kW-hr (0.14 grams/bhp-hr) (2-2-2018)		<u>Tier 4 Final:</u> 5.0 grams/kW-hr (3.7 grams/bhp-hr) (2-2-2018)	<u>Tier 4 Final:</u> 0.02 grams/kW-hr (0.01 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (2-2-2018)
	175 ≤ HP < 750		<u>Tier 4 Final:</u> 0.40 grams/kW-hr (0.30 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Final:</u> NMHC only: 0.19 grams/kW-hr (0.14 grams/bhp-hr) (12-02-2016)		<u>Tier 4 Final:</u> 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Final:</u> 0.02 grams/kW-hr (0.01 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (12-02-2016)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory	Rating/Size	Criteria Pollutants					
		VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM

(Continued on next page)

Compression-Ignition ³	≥750 HP ⁵		<u>Tier 4 Interim:</u> For Generator Sets > 1200 HP: 0.67 grams/kW-hr (0.50 grams/bhp-hr) For All Engines Except "Generator Sets > 1200 HP": 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Interim:</u> NMHC only: 0.4 grams/kW-hr (0.30 grams/bhp-hr) (12-02-2016)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-20039-15-2000)	<u>Tier 4 Interim:</u> 3.5 grams/kW-hr (2.6 grams/bhp-hr) (12-02-2016)	<u>Tier 4 Interim:</u> 0.10 grams/kW-hr (0.07 grams/bhp-hr) and CARB ATCM for portable diesel engines ⁴ (12-02-2016)
Spark Ignition	All	1.5 grams/bhp-hr, or 240 ppmvd as methane @ 15% O ₂ (4-10-1998)	1.5 grams/bhp-hr, or 80 ppmvd @ 15% O ₂ (4-10-1998)			2.0 grams/bhp-hr, or 176 ppmvd @ 15% O ₂ (4-10-1998)	

Notes:

- 1) BACT for "I.C. Engine, Portable" is determined by deemed complete date of permit application not date of manufacture or installation.
- 2) NMHC + NO_x means the sum of non-methane hydrocarbons and oxides of nitrogen emissions, unless specified as "NMHC only", which only includes NMHC emissions.
- 3) The engine must be certified by U.S. EPA or CARB to meet the Tier 4 emission requirements of 40 CFR Part 89 – Control of Emissions from New and In-use Nonroad Compression-Ignition Engines shown in the table– or otherwise demonstrate that it meets the Tier 4 emission limits. If, because of the averaging, banking, and trading program, there is no new engine from any manufacturer that meets the above standards, then the engine must meet the family emission limits established by the manufacturer and approved by U.S. EPA. Based on the model year, the CARB Airborne Toxic Control Measure (ATCM) for Portable Diesel Engines (see www.arb.ca.gov/diesel/peatcm/peatcm.htm) requires in-use portable

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

diesel engines to be certified to Tier 1, 2, 3 or 4 by their respective deadlines, all of which have passed. All exceptions allowed in the ATCM are also allowed in this guideline.

- 4) The CARB ATCM also requires in-use portable diesel engines to meet fleet-average PM standards beginning 1/1/2013. The PM limits in the table apply only to filterable PM.
- 5) CARB has extended the Tier 4 Final requirements deadline “until further notice” for Portable, Compression-Ignition Engines for HP \geq 750.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
 6-6-2003 Rev. 1
 12-3-2004 Rev. 2
 7-14-2006 Rev. 3
 10-3-2008 Rev. 4
 12-2-2016 Rev. 5
 2-1-2019 Rev.6
[xx-xx-2020 Rev. 7](#)

Equipment or Process: I.C. Engine, Stationary, Emergency ¹

Subcategory	Rating/Size	Criteria Pollutants					
		NMHC or VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
Compression Ignition, Fire Pump ^{3,4}	50 ≤ HP < 100			Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 4.7 grams/kW-hr (3.5 grams/bhp-hr) (10-03-2008)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (SCAQMD Rule 431.2). (6-6-2003 9-15-2000)	Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 5.0 grams/kW-hr (3.7 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) <u>Tier 3:</u> 0.40 grams/kW-hr (0.30 grams/bhp-hr) (10-03-2008)
	100 ≤ HP < 175			Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 4.0 grams/kW-hr		Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u>	Compliance with SCAQMD Rule 1470 (12-3-2004) <u>Tier 3:</u>

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory	Rating/Size	Criteria Pollutants					
		NMHC or VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
				(3.0 grams/bhp-hr) (10-03-2008)		5.0 grams/kW-hr (3.7 grams/bhp-hr) (10-03-2008)	0.30 grams/kW-hr (0.22 grams/bhp-hr) (10-03-2008)
Compression Ignition, Fire Pump ^{3,4} (continued)	175 ≤ HP < 750			Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 4.0 grams/kW-hr (3.0 grams/bhp-hr): (10-03-2008)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (SCAQMD Rule 431.2). (6-6-2003 9-15-2000)	Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 3.5 grams/kW-hr (2.6 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) <u>Tier 3:</u> 0.20 grams/kW-hr (0.15 grams/bhp-hr) (10-03-2008)
	≥750 HP			Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 2:</u> 6.4 grams/kW-hr (4.8 grams/bhp-hr) (10-03-2008)		Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 2:</u> 3.5 grams/kW-hr (2.6 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 2:</u> 0.20 grams/kW-hr (0.15 grams/bhp-hr) (10-03-2008)
Compression-Ignition, Other ^{3,4}	50 ≤ HP < 100			Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 4.7 grams/kW-hr (3.5 grams/bhp-hr) (10-03-2008)		Compliance with SCAQMD Rule 1470 (12-02-2016) <u>Tier 3:</u> 5.0 grams/kW-hr (3.7 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) <u>Tier 3:</u> 0.20 grams/kW-hr (0.15 grams/bhp-hr) (10-03-2008)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory	Rating/Size	Criteria Pollutants					
		NMHC or VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
Compression-Ignition, Other ^{3,4} (continued)	100 ≤ HP < 175			Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 4.0 grams/kW-hr (3.0 grams/bhp-hr) (10-03-2008)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-2003) 15-2000	Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 5.0 grams/kW-hr (3.7 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) Tier 3: 0.20 grams/kW-hr (0.15 grams/bhp-hr) (2-01-2019)
	175 ≤ HP < 300			Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 4.0 grams/kW-hr (3.0 grams/bhp-hr) (10-03-2008)		Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 3.5 grams/kW-hr (2.6 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) Tier 3: 0.20 grams/kW-hr (0.15 grams/bhp-hr) (10-03-2008)
	300 ≤ HP < 750			Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 4.0 grams/kW-hr (3.0 grams/bhp-hr) (7-14-2006)		Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 3: 3.5 grams/kW-hr (2.6 grams/bhp-hr) (7-14-2006)	Compliance with SCAQMD Rule 1470 (12-3-2004) Tier 3: 0.20 grams/kW-hr (0.15 grams/bhp-hr) (7-14-2006)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory	Rating/Size	Criteria Pollutants					
		NMHC or VOC	NO _x	NO _x + NMHC ²	SO _x	CO	PM
Compression-Ignition, Other ^{3,4} (continued)	≥750 HP			Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 2: 6.4 grams/kW-hr (4.8 grams/bhp-hr) (10-03-2008)	Diesel fuel with a sulfur content no greater than 0.0015% by weight (Rule 431.2). (6-6-2003 9-15-2000)	Compliance with SCAQMD Rule 1470 (12-02-2016) Tier 2: 3.5 grams/kW-hr (2.6 grams/bhp-hr) (10-03-2008)	Compliance with SCAQMD Rule 1470 (12-3-2004) Tier 2: 0.20 grams/kW-hr (0.15 grams/bhp-hr) (10-03-2008)
Spark Ignition ⁵	< 130 HP	VOC: 1.5 grams/bhp-hr (10-20-2000)	1.5 grams/bhp-hr (10-20-2000)		See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)	2.0 grams/bhp-hr (10-20-2000)	See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)
	≥ 130 HP	VOC: 1.0 grams/bhp-hr ⁶ (12-02-2016)	1.5 grams/bhp-hr (10-20-2000)		See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)	2.0 grams/bhp-hr (10-20-2000)	See Clean Fuels Policy in Part C of the BACT Guidelines (10-20-2000)

- 1) An emergency engine is an engine which operates as a temporary replacement for primary mechanical or electrical power sources during periods of fuel or energy shortage or while a primary power source is under repair. This includes fire pumps, emergency electrical generation and other emergency uses.
- 2) NMHC + NO_x means the sum of non-methane hydrocarbons and oxides of nitrogen emissions.
- 3) [SCAQMD South Coast AQMD](#) restricts operation of emergency compression-ignition engines to 50 hours per year, or less if required by Rule 1470, for maintenance and testing and a maximum of 200 hours per year total operation. For engines used to drive standby generators, operation beyond 50 hours per year for maintenance and testing is allowed only in the event of a loss of grid power or up to 30 minutes prior to a rotating outage provided that the electrical grid operator or electric utility has ordered rotating outages in the control area where the engine is located or has indicated that it expects to issue such an order at a certain time, and the engine is located in a control area that is subject to the rotating outage.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

- 4) The engine must be certified by U.S. EPA or CARB to meet the Tier 1, 2 or 3 emission requirements of 40 CFR Part 89 – Control of Emissions from New and In-use Nonroad Compression-Ignition Engines shown in the table– or otherwise demonstrate that it meets the Tier 1, 2 or 3 emission limits. If, because of the averaging, banking, and trading program, there is no new engine from any manufacturer that meets the above standards, then the engine must meet the family emission limits established by the manufacturer and approved by U.S. EPA. The PM limits apply only to filterable PM.
- 5) [SCAQMD South Coast AQMD](#) restricts operation of emergency spark-ignition engines to 50 hours per year for maintenance and testing and a maximum of 200 hours per year total operation. Emergency spark-ignition engines may be used in a Demand Response Program, however the engine will require additional evaluation and may be subject to more stringent regulatory requirements. Since some requirements are based upon the California Airborne Toxic Control Measure for Stationary Compression Ignition Engines, applicants are referred to Title 17, Section 93115.3 of the California Code of Regulations for possible exemptions.
- 6) VOC limit is based on the requirement listed in Table 1 of 40 CFR 60 Subpart JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

12-02-2016 Rev. 0

2-2-2018 Rev. 1

Equipment or Process: I.C. Engine, Stationary, Non-Emergency, Non-Electrical Generators

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM10	
> 50 bhp	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	See Clean Fuels Policy in Part C of the BACT Guidelines (12-02-2016)	Compliance with SCAQMD Rule 1110.2 (12-02-2016)	See Clean Fuels Policy in Part C of the BACT Guidelines (12-02-2016) Compliance with Rule 1470 (12-02-2016)	
Landfill or Digester Gas Fired ¹	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	Compliance with SCAQMD Rule 431.1 (12-02-2016)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)		

- 1) For the adoption of this new listing, the requirements for this subcategory were transferred directly from the existing requirements under “I.C. Engine, Stationary, Non-Emergency.” The requirements are not new, but the date listed was updated to reflect the date of adoption of the new listing.

2-2-2018 Rev. 0

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Equipment or Process: I.C. Engine, Stationary, Non-Emergency, Electrical Generators ¹

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
> 50 bhp	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	See Clean Fuels Policy in Part C of the BACT Guidelines (2-2-2018)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	See Clean Fuels Policy in Part C of the BACT Guidelines (2-2-2018) Compliance with Rule 1470 (2-2-2018)	
Landfill or Digester Gas Fired	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)	Compliance with SCAQMD Rule 431.1 (2-2-2018)	Compliance with SCAQMD Rule 1110.2 (2-2-2018)		

1) This BACT listing was adapted from the previous "I.C. Engine, Stationary, Non-Emergency," Part D BACT listing.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Jet Engine Test Facility

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Experimental High Altitude Testing					Venturi Scrubber with Water Spray in Exhaust (1988)	
Experimental Sea Level (Low Altitude) Testing ¹						
Performance Testing ¹						

1) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic [SCAQMD](#) [South Coast AQMD](#) BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Landfill Gas Gathering System

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Compliance with SCAQMD Rule 1150.1 - Control of Gaseous Emissions from Municipal Solid Waste Landfills (10-20-2000)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Latex Manufacturing - Reaction

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Catalytic Incinerator and Caustic Scrubber (1988)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev. 1

Equipment or Process: Lead Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Pot or Crucible, Non-Refining Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas and Melt only Sows, Pigs, Ingots or Clean Scrap (1990)	
Pot or Crucible, Refining Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas with Scrubber; or Natural Gas with Sulfur Free Refining Agents (1990)		Natural Gas with Baghouse (1990)	
Reverberatory, Secondary Melting Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas with Scrubber (1990)		Natural Gas with Baghouse (1990)	

Note: Some secondary lead smelting operations must also comply with the National Emission Standards for Hazardous Air Pollutants, 40 CFR Part 63, Subpart X.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Lead Oxide Manufacturing – Reaction Pot Barton Process

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas (1988)	Natural Gas (1988)		Natural Gas with Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

12-02-2016 Rev.1

Equipment or Process: Liquid Transfer and Handling

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Marine, Loading	For VOC Emissions: Vapor Collection System Vented to Incinerator (1990)					
Tank Truck and Rail Car Bulk Loading, Class A (SCAQMD Rule 462)	Compliance with SCAQMD Rule 462 (0.08 Lbs/1000 Gals) (10-20-2000)					For Ammonia: Bottom Loading with Vapor Collection System Vented to Packed Column Scrubber (10-20-2000)
Tank Truck and Rail Car Bulk Loading, Classes B and C (SCAQMD Rule 462)	Bottom Loading with Vapor Collection System Vented to: <ul style="list-style-type: none"> - Incinerator; or - Compression/absorption with Tail Gas Vented to Incinerator; or - Refrigeration System; or - Carbon Adsorption system and Compliance with SCAQMD Rule 462 (10-20-2000)					Same as Above
Gasoline Transfer and Dispensing	Compliance with Rule 461 (12-02-2016)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Metal Heating Furnace

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas with Low NO _x Burner ≤ 50 ppmvd at 3% O ₂ , dry. (10-20-2000)	Natural Gas (1990)			Natural Gas (1990)

Note: This category includes metal aging, annealing, forging, heat treating, and homogenizing.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Metallizing Spray Gun

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Water Wash Spray Booth or Scrubber (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Mixer, Blender or Mill

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Dry					Baghouse (07-11-97)	
Wet	Carbon Adsorber; or Refrigerated Condenser; or Afterburner (VOC Emissions Only); or Vapor Recovery (07-11-97)				Baghouse if Dry Ingredients are Added (07-11-97)	Packed Column Scrubber (07-11-97)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Nitric Acid Manufacturing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Catalytic Reduction Furnace (07-11-97)				

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Non-Metallic Mineral Processing – Except Rock or Aggregate

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse for Enclosed Operations Water Fog Spray for Open Operations (1988)	

- Notes:
1. Non-metallic Minerals are minerals such as rock salt, sodium compounds, pumice, gilsonite, talc and pyrophyllite, boron, barite, fluorspar, feldspar, diatomite, perlite, vermiculite, mica, carbon black, silicon and kyanite.
 2. This category includes conveying, size reduction and classification.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Nut Roasting

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Roaster		Natural Gas (1988)			Afterburner (≥ 0.3 second Retention Time at ≥ 1,400 °F) (10-20-2000)	
Handling Equipment					Baghouse (10-20-2000)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

12-02-2016 Rev. 1

Equipment or Process: Oil and Gas Production

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Combined Tankage	All Tanks Vented to: - Vacuum Gas Gathering System; or - Positive Pressure Gas Gathering System; or - Incinerator or Firebox (1988) Compliance with SCAQMD Rules 1148 and 1148.1 (12-02-2016)					
Wellhead	All Wellheads Vented to: - Vacuum Gas Gathering System; or - Positive Pressure Gas Gathering System; or - Incinerator or Firebox (10-20-2000) Compliance with SCAQMD Rules 1148 and 1148.1 (12-02-2016)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
XX-XX-2020 Rev. 1

Equipment or Process: Open Process Tanks:
Chemical Milling (Etching)
and Plating

<u>Subcategory/ Rating/Size</u>		<u>Criteria Pollutants</u>					<u>Inorganic</u>
		<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM₁₀</u>	
<u>Chemical Milling</u>	<u>Aluminum and Magnesium¹</u>						
	<u>Nickel Alloys, Stainless Steel and Titanium</u>		<u>Packed Chemical Scrubber (10-20-2000)</u>			<u>High Efficiency Mist Eliminator (10-20-2000)</u>	
<u>Plating</u>	<u>Decorative Chrome</u>					<u>Packed Scrubber and Mist Suppressant (1988) Compliance with Rule 1469 (10-20-2000)</u>	
	<u>Hard Chrome</u>					<u>Packed Scrubber and Mist Suppressant (1988) Compliance with Rule 1469 (10-20-2000)</u>	

1) At the date of the last revision for this category, there was no Achieved In Practice BACT Determination for this subcategory. Technologically Feasible options listed in historic South Coast AQMD BACT Guidelines for this subcategory require cost effective analyses before they can be listed in these current Guidelines.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Equipment or Process: Open Spraying – Spray Gun**

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Compliance with Regulation XI (10-20-2000)				Compliance with Regulation XI (10-20-2000)*	

** The open spraying must be conducted in a spray booth where feasible.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Perlite Manufacturing System

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas with Low NO _x Burner (10-20-2000)	Natural Gas (10-20-2000)		Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

7-9-2004 Rev. 1

Equipment or Process: Pharmaceutical Manufacturing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Operations Involving Solvents	Afterburner (≥0.3 second Retention Time at ≥1,400°F), Refrigerated Condenser, or Carbon Adsorber (07-11-97)					
Solids Handling					Baghouse (07-11-97)	
Solids Storage Tanks					Baghouse or Vent Filter (07-11-97)	

Note: This equipment may also be subject to [SCAQMD](#) Rule 1103 and 40 CFR 63 Subpart GGG – National Emission Standards Pharmaceuticals Production. (7-9-2004)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Phosphoric Acid - Thermal Process

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Fiber Mist Filter, Electrostatic Precipitator, or Packed Scrubber with Mist Eliminator (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Phthalic Anhydride

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Afterburner (≥0.3 Second Retention Time at ≥1,400°F) or Water Cooled Condenser (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Plasma Arc Metal Cutting Torch

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
> 30 KVA Electrical Input					Water Table and Nozzle Water Shroud; or Electrostatic Precipitator (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Polyester Resin Operations—Molding and Casting

Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
All	Compliance with SCAQMD's Rule 1162 and Use of Aqueous Emulsion Cleaner or Acetone for Clean Up to Maximum Extent Possible (1988/10-20-2000)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
XX-XX-2020 Rev. 1

Equipment or Process: Polyester Resin Operations

<u>Subcategory/ Rating/Size</u>	<u>Criteria Pollutants</u>					<u>Inorganic</u>
	<u>VOC</u>	<u>NOx</u>	<u>SOx</u>	<u>CO</u>	<u>PM₁₀</u>	
<u>Fabrication – Hand and Spray Layup</u>	<u>Compliance with Rule 1162 (10-20-2000)</u>				<u>Airless Spray Equipment and Spray Booth with Mesh Type Filter (1988)</u>	
<u>Molding and Casting</u>	<u>Compliance with Rule 1162 and Use of Aqueous Emulsion Cleaner or Acetone for Clean-Up to Maximum Extent Possible (1988/10-20-2000)</u>					
<u>Panel Manufacturing</u>	<u>Curing Oven, Impregnation Tables and Mixing Tanks Vented to an Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F). Storage and Holding Tanks Vented to a Carbon Adsorber (1988)</u>	<u>Natural Gas Fired Curing Oven, Electrically Heated Cellophane Oven and Laminating Table (1988)</u>	<u>Natural Gas (10-20-2000)</u>		<u>Natural Gas Fired Curing Ovens, Cellophane Ovens Vented to an Electrostatic Precipitator and Panel Cutting Saw Vented to Baghouse (1988)</u>	
<u>Pultrusion</u>	<u>Styrene Suppressed Resin (1988), and Compliance with Rule 1162 (10-20-2000)</u>					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Polystyrene Extruder

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Electrostatic Precipitator or Fiber Mist Filter (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Polystyrene Manufacturing

Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
All	Water Cooled Condenser (07-11-97)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
XX-XX-2020 Rev. 1

Equipment or Process: Powder Coating Booth

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
≤ 37 Lbs/Day Throughput					Pocket or Bag-Type Filters (10-20-2000)	
≥ 37 Lbs/Day Throughput					Powder Recovery System with a Cyclone Followed by a Baghouse or Cartridge /Dust Collector or HEPA Filters (≥ 99% efficiency) <u>1. Baghouse (≥99%);</u> <u>or</u> <u>2. Cartridge Filters (≥99%); or</u> <u>3. HEPA Filters (≥99.97%)</u> (1988/10-20-2000)(XX-XX-20)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Precious Metal Reclamation

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Incineration		Natural Gas (1988)	Natural Gas (1988)		Natural Gas with Baghouse and: - Afterburner (≥ 0.3 sec. Retention Time at ≥ 1400° F); or -Secondary Combustion Chamber (≥ 0.3 sec. Retention Time at ≥ 1400° F) (1988)	
Chemical Recovery and Chemical Reactions		3-Stage NO _x Reduction Scrubber (07-11-97)				

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
12-5-2003 Rev. 1
7-14-2006 Rev 2
2-2-2018 Rev 3
2-1-2019 Rev 4

Equipment or Process: Printing (Graphic Arts)

Subcategory	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Flexographic	Inks with ≤ 1.5 Lbs VOC/Gal, Less Water and Less Exempt Compounds (1990); or use of UV/EB or water-based inks/coatings ≤ 180 g VOC/L. Compliance with SCAQMD Rules 1130 and 1171 (2-2-2018)					
Control Alternative	For add-on control required by SCAQMD Rule 1130(c)(5) or other South Coast AQMD District requirement: EPA M. 204 Permanent Total Enclosure (100% collection) vented to afterburner thermal oxidizer with 95% overall control efficiency; Combustion Chamber: Temp ≥ 1500°F ¹ , Retention Time > 0.3 seconds (2-2-2018)	Compliance with SCAQMD Rule 1147 at time of applicability (2-2-2018) Thermal Oxidizer BACT requirements		Compliance with Thermal Oxidizer BACT requirements		
Letterpress	Compliance with SCAQMD Rules 1130 and 1171 (12-5-2003)					
Lithographic or Offset, Heatset	Low VOC Fountain Solution (≤ 8% by Vol. VOC); Low VOC (≤ 100 g/l) Blanket and Roller Washes; Oil Based or UV-Curable Inks; and Compliance with SCAQMD Rules 1130 and 1171 (2-2-18) Oven Vented to a thermal oxidizer (≥ 0.3 Sec. Retention Time at ≥ 1400 °F; 95% Overall Efficiency) (10-20-2000)	Compliance with Thermal Oxidizer BACT requirements		Compliance with Thermal Oxidizer BACT	Venting to an afterburner thermal oxidizer (≥ 0.3 sec. Retention Time at ≥ 1400 °F)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Subcategory	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
				requirements	(10-20-2000) (2-1-2019)	
Control	Oven Venting to an Afterburner (≥ 0.3 Sec. Retention Time at ≥ 1400 °F; 95% Overall Efficiency) (10-20-2000)	Compliance with SCAQMD Rule 1147				
Lithographic or Offset, Non-Heatset	Low VOC Fountain Solution (≤ 8% by Vol. VOC); Low VOC (≤ 100 g/l) Blanket and Roller Washes; Oil-Based or UV-Curable Inks; and Compliance with SCAQMD Rules 1130 and 1171. (2-1-2019)					
Rotogravure or Gravure—Publication and Packaging	Compliance with SCAQMD Rules 1130 and 1171 (10-20-2000)					
Screen Printing and Drying	Compliance with SCAQMD Rules 1130.1 and 1171; or use of Rule 1130.1 and 1171 compliant UV/EB or water-based inks/coatings. (2-2-2018).					

1) or temperature demonstrating equivalent overall control efficiency in a [DistrictSouth Coast AQMD](#)-approved source test.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
10-03-2008 Rev. 1
12-02-2016 Rev. 2
2-1-2019 Rev. 3

Equipment or Process: Process Heater – Non-Refinery

Subcategory/Rating/ Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Natural Gas or Propane Fired, >2 and < 20 MM Btu/hr		Compliance with SCAQMD Rules 1146 or 1146.1 (12-02-2016)	Natural Gas (10-20-2000)	≤50 ppmv for firetube type, ≤ 100 ppmv for watertube type, dry corrected to 3% O ₂ (10-20-2000)	Natural Gas (10-20-2000)	
Natural Gas or Propane Fired, ≥ 20 MM Btu/hr		Compliance with SCAQMD Rules 1146 (2-1-2019)	Natural Gas (10-20-2000)	Same as above. (10-20-2000)	Natural Gas (10-20-2000)	<u>With SCR:</u> ≤ 5 ppmvd NH ₃ , corrected to 3% O ₂ <u>With LTO:</u> ≤ 1 ppmvd ozone, corrected to 3% O ₂ (10-20-2000)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
12-5-2003 Rev. 1

Equipment or Process: Reactor with Atmospheric Vent ^{a)}

Rating/Size	Criteria Pollutants					Inorganic
	VOC/ODC	NO _x	SO _x	CO	PM ₁₀	
All	<ul style="list-style-type: none"> - Carbon Adsorber; or - Afterburner (VOC Only); or - Refrigerated Condenser; or - Scrubber with Approved Liquid Waste Disposal (VOC only) (1990)					

a) Also see “Resin Manufacturing” and “Surfactant Manufacturing”. (12-5-2003)

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Rendering

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Processing Equipment ¹⁾					Vent to Afterburner or Boiler Fire Box (≥ 0.3 sec. Retention Time at ≥ 1200 °F) (1988)	
Meal Grinding and Handling System					Enclosed Grinding and Screening Operation with Mechanical Conveyors Transporting Meal (1988)	
Tanks and Miscellaneous Equipment					Maintain Internal Temperature Below 140 °F (1988)	

- 1) Processing equipment includes crax pressing, filtering, centrifuging, evaporators, cookers, dryers, and grease and blood processing.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

12-5-2003 Rev. 0

Equipment or Process: Resin Manufacturing

Subcategory	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Continuous Polystyrene Process	Compliance with SCAQMD Rule 1141: ≤0.12 Pounds VOC per 1000 Pounds Completed Resin Product from Vacuum Devolatilizer and Styrene Recovery Systems (12-5-2003)					
Liquid-Phase, High-Density Polyethylene Slurry Process	Compliance with SCAQMD Rule 1141: ≥98% Reduction from Reactors, Recycle Treaters, Thinning Tanks, Blending Tanks and Product Finishing Section (12-5-2003)					
Liquid-Phase Polypropylene Process	Compliance with SCAQMD Rule 1141: ≥98% Reduction from Organic Resin Reactors, Slurry Vacuum Filter System, Diluent Recovery Section and Product Finishing Section (12-5-2003)					
Other Resin Manufacturing	Compliance with SCAQMD Rule 1141: ≤0.5 Pounds VOC per 1000 Pounds Completed Resin Product, or ≥95% Reduction from Resin Reactors, Thinning Tanks and Blending Tanks (12-5-2003)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Rock – Aggregate Processing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse Venting Jaw Crushers, Cone Crushers, and Material Transfer Points Adjacent to and after these Items; and Water Sprays at Other Material Transfer Points (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Rocket Engine Test Cell

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Chemical Packed Scrubber (1988)			Chemical Packed Scrubber and Water Spray in Exhaust with Steam Ejectors (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Rubber Compounding – Banbury Type Mixer

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Sand Handling System with Shakeout and/or Muller in System

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Sewage Treatment Plants

Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
All	Carbon Adsorber or Scrubbing System, Covers for Primary Raw Sewage Processing, and Digester Gas Incineration or Recovery (1988)		Ferrous Chloride Injection and Caustic Scrubber for Hydrogen Sulfide Removal (1988)			

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Smokehouse

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Afterburner (≥ 0.3 sec. Retention Time at ≥ 1200° F) (1990)	Steam Heated Smokehouse and Electrically Heated Smoke Generator (1990)		Afterburner (≥ 0.3 sec. Retention Time at ≥ 1200° F) (1990)	Afterburner (≥ 0.3 sec. Retention Time at ≥ 1200° F) (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

2-1-2019 Rev. 0

Equipment or Process: Soil Vapor Extraction – Thermal/Catalytic Oxidation (Natural Gas – burner only)

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	.	Compliance with Rule 1147.				

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Solder Leveling –Hot Oil or Hot Air

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Electrostatic Precipitator (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Solvent Reclamation

Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
All	Refrigerated or Water Cooled Condenser (07-11-97)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

2-1-2019 Rev 1

XX-XX-2020 Rev 2

Equipment or Process: Spray Booth

Subcategory/ Rating/Size	Criteria Pollutants					
	VOC	NOx	SOx	CO	PM ₁₀	Inorganic
Fully Enclosed Automatic , Down-Draft Type, < 667 Lbs/Month of VOC Emissions (XX-XX-2020)	Compliance with Applicable SCAQMD Regulation XI Rules (10-20-2000)	If booth has a Make-up Air Unit or a Heater; Compliance with Rule 1147 (XX-XX-2020)			Dry Filters or Waterwash (1990)	
Other Types, < 1170 Lbs/Month of VOC Emissions	Compliance with Applicable SCAQMD Regulation XI Rules (10-20-2000)	If booth has a Make-up Air Unit or a Heater; Compliance with Rule 1147 (XX-XX-2020)			Same as Above (1990)	
Fully Enclosed Automatic , Down-Draft Type, ≥ 22 Lbs/Day of VOC Emissions (XX-XX-2020)	<ul style="list-style-type: none"> - Compliance with Applicable SCAQMD Regulation XI Rules, and VOC Control System with ≥ 90% Collection Efficiency and ≥ 95% Destruction Efficiency, or - Use of Super Compliant Materials (≤ 50 grams of VOC per liter of material 5% VOC by weight); or - Use of Low-VOC Materials Resulting in an Equivalent Emission Reduction (10-20-2000) 	If booth has a Make-up Air Unit or a Heater; Compliance with Rule 1147 (XX-XX-2020)			Same as Above (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

Other Types, ≥ 1170 Lbs/Month of VOC Emissions	<ul style="list-style-type: none"> - Compliance with Applicable Regulation XI Rules, and VOC Control System with ≥ 90% Collection Efficiency and ≥ 95% Destruction Efficiency, or - Use of Super Compliant Materials (<50 grams of VOC per liter of material): or - Use of Low-VOC Materials Resulting in an Equivalent Emission Reduction <p>Same as Above (10-20-2000)</p>	If booth has a Make-up Air Unit or a Heater; Compliance with Rule 1147 (XX-XX-2020)			Same as Above (1990)	
Enclosed with automated spray nozzles for wood cabinets, < 1170 Lbs/Month of VOC Emissions (XX-XX-2020)	Compliance with Rule 1136 or use of Rule 1136 compliant UV/EB or water-based coatings.	If booth has a Make-up Air Unit or a Heater; Compliance with Rule 1147				

Note: The sum of all VOC emissions from all spray booths within the same subcategory applied for in the previous two years at the same facility are considered toward the emission threshold.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Steel Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Electric Arc					Baghouse (1988)	
Induction, ≤ 300 Lb. Capacity					Charge Only Ingots or Clean Returns, or Baghouse (10-20-2000)	
Induction, > 300 Lb. Capacity					Baghouse (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Storage Tanks - Liquid

Subcategory/ Rating/Size	Criteria Pollutants					
	VOC	NO _x	SO _x	CO	PM ₁₀	Inorganic
Asphalt					Cool Gases to < 120 °F and Vent to a Fiberglass or Steel Wool Filter. (07-11-97)	
External Floating Roof, VP ≤ 11 psia	Category A Tank Seals and Compliance with Rule 463 (10-20-2000)					
Fixed Roof	Vapor Recovery System with an Overall System Efficiency of ≥ 95% (7-11-97)					
Fuming Sulfuric Acid					Scrubber Followed by Fiber Mist Filter; or Water Spray Followed by Fiber Mist Filter (1988)	
Grease or Tallow					Maintain Temperature ≤ 140 °F (1988)	
Internal Floating Roof	Category A Tank Seals and Compliance with Rule 463 (10-20-2000)					
Sulfuric Acid			Caustic Scrubber and Mist Eliminator (1988)			
Underground, > 250 Gallons	≥ 95% Removal Efficiency for VOC (1990)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

12-5-2003 Rev. 0

Equipment or Process: Surfactant Manufacturing

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All	Compliance with SCAQMD Rule 1141.2^{a)} : ≤ 0.5 Pounds per 1000 Pounds of Surfactant Product, or ≥ 95% (Wt.) Reduction From All Surfactant Manufacturing Equipment Vented to Atmosphere (12-5-2003)					

a) Does not apply to soap manufacturing operations or facilities that only blend and package surfactants.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Tank – Grease or Tallow Processing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Water Cooled or Atmospheric Condenser and Afterburner (≥ 0.3 sec. Retention Time at ≥ 1200 °F) (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

2-1-2019 Rev. 0
[xx-xx-2020 Rev. 1](#)

Equipment or Process: Thermal Oxidizer (Afterburner, [Regenerative Thermal Oxidizer, and Thermal Recuperative Oxidizer](#)), and Catalytic Oxidizer – Natural Gas Fired**

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Regenerative Thermal Oxidizer (xx-xx-2020)		30 ppmvd @ 3% O₂ (Burner emissions only)		400 ppmvd @ 3% O₂ (Burner emissions only)		
Other Types		30 ppmvd @ 3% O ₂ (Burner emissions only)				

** Does not include tank degassing, soil vapor extraction, and vapor incinerators where vapors are directed into the burner or into a combustion chamber.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Tire Buffer

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Cyclone and Water Spray at Rasp (07-11-97)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Vegetable Oil Purification

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
All	Scrubber and Barometric Condenser (1988)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Vinegar Manufacturing

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All	Scrubber with SCAQMD South Coast AQMD - and Sanitation District- Approved Liquid Disposal (1988)					

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
12-5-2003 Rev. 1

Equipment or Process: Wastewater System

Subcategory	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Oil/Water Separator	Cover and Vent to Vapor Disposal System (1988); and Compliance with SCAQMD Rule 1176 (12-5-2003)					
Other Equipment	Compliance with SCAQMD Rule 1176 if Applicable by Rule ^{a)} (12-5-2003)					

a) Not required for sanitary sewer system.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Wax Burnoff Furnace

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All		Natural Gas with Low Nox Burner (1988)]	Natural Gas (1988)		Natural Gas with Afterburner or Secondary Combustion Chamber (≥ 0.3 sec. Retention Time at ≥ 1200° F) (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0

Equipment or Process: Wood Processing Equipment

Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
All					Baghouse (1988)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

12-5-2003 Rev. 0

Equipment or Process: Woodworking

Subcategory	Criteria Pollutants					Inorganic
	VOC	NOx	SOx	CO	PM ₁₀	
Pneumatic Conveyance System					Compliance with SCAQMD Rule 1137 ^{a)} : Baghouse with No Visible Emissions Except During Startup and Shutdown (12-5-2003)	

a) Not required if system vents solely to stand-alone control device or into a closed room.

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Best Available Control Technology (BACT) Guidelines for Non-Major Polluting Facilities*

10-20-2000 Rev. 0
2-1-2019 Rev 1

Equipment or Process: Zinc Melting Furnace

Subcategory/ Rating/Size	Criteria Pollutants					Inorganic
	VOC	NO _x	SO _x	CO	PM ₁₀	
Crucible or Pot		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Ingot and/or Clean Scrap Charge Only, or Baghouse (1988/2000)	
Reverberatory, Non-Sweating Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Same as Above (10-20-2000)	
Reverberatory, Sweating Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Natural Gas with Baghouse and: Afterburner (≥ 0.3 sec. Retention Time at $\geq 1400^{\circ}$ F); or Secondary Combustion (≥ 0.3 sec. Retention Time at $\geq 1400^{\circ}$ F); (1990)	
Rotary, Sweating Operations		60 ppm Compliance with Rule 1147 (2-1-2019)	Natural Gas (1990)		Same as Above (1990)	

* Means those facilities that are not major polluting facilities as defined by Rule 1302 - Definitions